

REMARKS

Claims 41-89, 122 and 123 remain in this case. Claims 44, 45, 47, 48, 61, 63, 74 and 89 have been withdrawn under a restriction requirement.

Formal Matters:

Claims 41-43, 46, 49-60, 62, 64-73, 75 and 88 have been rejected under 35 USC §112, second paragraph, as being indefinite. The phrase "arranging the segments ... generally along expected load lines" was considered unclear. First, it should be noted that exemplary expected load lines are shown in the drawings. However, expected load lines are actually a continuum of expected load lines, only a reasonable number of expected load lines being determined or used. For example, for a particular sail under a particular loading, there are innumerable possibly determined or calculated expected load lines. The only limitation is how close the sail designer needs or wants the expected load lines to be. In practice the sail designer would determine an appropriate number of expected load lines for the particular sail section being produced. Second, when arranging the segments along the expected load lines, it would not be possible to arrange all the segments exactly along expected load lines; some deviation within conventional manufacturing tolerances would occur. That is what is meant by, and is what one of ordinary skill in the art would understand to be meant by, "generally along expected load lines" as opposed to simply "along expected load lines." Accordingly, applicants submit that these claims are not indefinite. If the Examiner has any questions about this, a telephone conference with the undersigned would certainly be appreciated.

Claim 43 has been amended to correct the dependency to claim 46.

Claim 48 has been withdrawn from consideration.

The objections to claim 75-78, 80, 84 and 85 have been obviated by the correction of the spelling of the word "pressure" in claim 75.

Substantive Matters:

Claims 41-43, 46, 48, 49, 54-59, 64-63 and 76-88 have been rejected as unpatentable over Moldner (U.S. Patent No. 5,470,632) in view of Linville (U.S. Patent No. 5,097,783). Applicants note with appreciation the indication that claims 50-53, 60, 62, and 75 (from which claims 76-78, 80, 81, 84 and 85 depend) would be allowable if placed in independent form with §112 matters attended to.

The cited art

The Meldner patent discloses a sail 10 made of panels (sections) 12. Each panel 12 is created from a laminate 30. Laminate 30 has three layers of uni-tape 32, 34, 36 located between upper and lower films 40, 42. The tapes are made of monofilaments, the monofilaments of one tape oriented at an angle to the other tapes as shown in Fig. 2. The panels 12 are "designed so that the major direction of strength of each panel is along the major stress lines, here indicated by reference to character 20." Column 7, lines 22-24. The Meldner patent thus teaches the use of a single orientation of reinforcement elements for the entire panel 12 of the sail 20. The other reinforcement elements (monofilaments) are used to increase the shear strength along the arrow 58 as shown in Fig. 4, not to counteract stress along "the major direction of strength."

The cited art distinguished

The Examiner states that Meldner discloses a sail cloth-making process comprising "arranging the filaments such that they are substantially aligned with the principal stress direction;". However, this is not what is claimed. **Claim 41** recites the step of "arranging the segments on the first layer of material generally along expected load lines;". With the Meldner structure, the segments are arranged generally parallel to a single, average or typical load line (the principal stress direction); the segments are not arranged generally along expected load lines.

The Examiner also states that Meldner discloses a sail cloth-making process comprising "securing the filaments to the outer layers of the respective panels so that, as illustrated in figure 1, the length of filaments in each panel forming the sail cloth only extend partway along the expected load lines of the sail cloth." However, this too is not what is claimed. The composite created according to claim 41 corresponds to a single section (or panel), which can be used to create a single section sail 2 as shown in figure 1, or to a section 3, which can be used to create the multiple section sail of figure 1A. Claim 83 emphasizes this by specifying that a plurality of the composites of claim 41 are joined and finished to create a sailcraft sail, for example that shown in figure 1A. Therefore, Claim 41 is directed to a single section or panel, not the multiple panel structure (sail 10) illustrated in figure 1 of Meldner. The filaments of each panel of Meldner extend completely across the panel so that Meldner does not disclose or suggest "the choosing step comprising the step of selecting lengths of the segments so that at least most of the segments extend only part way along the expected load lines;".

Accordingly, **claim 41** is allowable over the cited art.

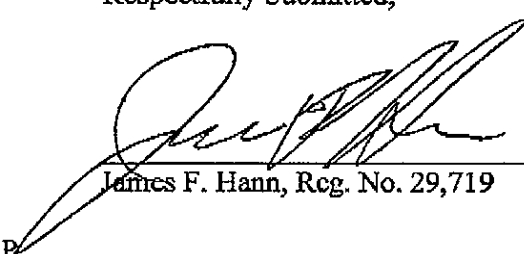
The **dependent claims** are directed to specific novel subfeatures of the invention and are allowable for that reason as well as by depending from novel parent claims. For example, with regard to **claim 46**, it

would not have been obvious to use mats of mat elements as the stretch-resistant segments because there is no suggestion in the prior to replace the filaments of Meldner with mats of mat elements. **Claim 82** recites that the composite is finished to form a sailcraft sail; an example of such a single-section sailcraft sail is shown in figure 1 of the present application; all at the filaments of a single-panel sailcraft sail made according to the teachings of Meldner would be oriented in a single direction, not along expected load lines. Various claims directed to specific **laminating aspects** of the invention, such as claim 72, would not have been obvious in light of the cited art.

In light of the above remarks and the amendments to the claims, applicants submit that the application is in condition for allowance and action to that end is urged. If the Examiner believes a telephone conference would aid the prosecution of this case in any way, please call the undersigned at (650) 712-0340.

Respectfully Submitted,

Date: 16 January 2004


James F. Hann, Reg. No. 29,719

Haynes Beffel & Wolfeld LLP
P.O. Box 366; 751 Kelly Street
Half Moon Bay, CA 94019
Phone: (650) 712-0340